

REMARKS

I. Status Summary

With this Amendment, Claims 1-56 are pending in the present application. Claims 1, 38 and 39 have been amended. Reconsideration of the application and entry of the Amendment is respectfully requested.

II. Information Disclosure Statement

Applicants have included herewith an Information Disclosure Statement citing the references listed on page 3 of the present application. Applicants are citing these references to fulfill its obligation to disclose pertinent information for the present application. Applicants further note that the Examiner has already cited both of these references on the form PTO-892.

III. Claim Rejection under 35 U.S.C. § 101

Claim 39 stands rejected under 35 U.S.C. § 101 because the Examiner asserts that the claimed invention is directed to a non-statutory subject matter. Claim 39 has been amended to recite a method according to claim 38 comprising arranging the tactical switching device into a 3 x 2 Braille cell, wherein actuating the combination of switching devices into respective raised positions permits facilitation of learning to read Braille characters by the person. Applicants respectfully submit that this claim necessarily provides a useful concrete tangible result in that it gives a person an opportunity to learn Braille by arranging the tactical switching devices of

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claim 38 into a 3 x 2 Braille cell. Thus, applicants respectfully submit that the rejected of claim 39 under 35 U.S.C. § 101 should be withdrawn.

IV. Claim Rejection under 35 U.S.C. § 102(b)

Claims 1, 38, and 42 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,154,614 to Matsuoka, et al. (hereinafter, "Matsuoka").

Applicants note that it is well settled that for a cited reference to qualify as prior art under 35 U.S.C. §102, each element of the claimed subject matter must be disclosed within the reference. See Hybritec, Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81 (Fed. Cir. 1986) (stating that "[i]t is axiomatic that for prior art to anticipate under 102 it has to meet every element of the claimed invention"). Accordingly, applicants respectfully submit that Matsuoka does not disclose each and every element of the claims 1, 38, and 42 and therefore cannot anticipate these claims under 35 U.S.C. §102(b).

IV. A. Independent Claims 1 and 38 Rejected Under 35 U.S.C. § 102(b)

Independent claim 1 recites an apparatus for use in instructing a user to communicate in Braille including a frame and a plurality of tactile switching devices mounted to the frame. Each tactile switching device is configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot. The electronic circuitry communicates with the switching devices for producing an auditory output for

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emission by the audio output device in response to a combination of switching devices selectively activated by a user. Further, the auditory output corresponds to the Braille character represented by the combination of activated switching devices.

Independent claim 38 recites a method for instructing a person in communicating in Braille. The method recites providing a plurality of tactile switching devices, each switching device configured to be actuatable between a raised position that can be sensed by a person as a raised Braille dot and lower position that can be sensed as the absence of a Braille dot. The method further recites that, in response to a combination of switching devices actuated into respective raised positions, providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated.

IV. B. Arguments Against the Rejection of the Claims based on 35 U.S.C. § 102(b)

Applicants respectfully submit that Matsuoka does not anticipate independent claims 1 or 38 or the claims that depend therefrom. In particular, Matsuoka does not disclose all the features of independent claims 1 and 38.

Matsuoka discloses a sound output electronic apparatus having a main body 1 with six positions to which input devices, such as buttons, reside. Each input key 2a through 2f represents a Braille point or dot in the two columns and three rows that form the matrix of Braille characters. To form a character, the input key 2a to 2f each of which represent a point in Braille are depressed accordingly. (See Matsuoka column 2, lines 23-37.) As illustrated in Figure 1 and Figures 2a and 2b, each point

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of the six Braille points which form Braille characters are assigned to one of the input keys **2a** to **2f**. To form a Braille point which rises above the sheet that a blind person would tactilely feel in order to read the letter, an input key must be depressed on the apparatus to register that raised Braille point within the electronic device. For example, as shown in Figure 2, input key **2a** which represents the first Braille point within the Braille character is depressed in order to register the Braille character of "a" which, within Braille, is the first raised point as shown by the hatched region of Figure 2A. Thus, when representing a Braille character, the input keys are not raised to emulate a raised Braille dot but rather depressed in order to create a signal for input into the electronic apparatus of Matsuoka to represent an associated raised point.

Matsuoka also teaches that once the key is depressed to represent a Braille point or dot, the button automatically raises to its resting position after the user releases the input key. Therefore, after pushing the input key and the user removes his finger from that input key, the input key does not remain in a position that would emulate a Braille character.

Further, based on the disclosure within the Figures of Matsuoka, it appears that the input keys **2a** - **2f** are flush with the main body when they are in their resting position.

In contrast, the apparatus claim 1 and the method of claim 38 recite that the plurality of tactile switching devices are configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position

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which emulates the absence of a Braille dot. Thus, in the resting position, tactile switching devices are in a raised position. When forming a Braille character, instead of depressing the tactile switching device that represents the raised dot within a Braille character, the user would actually depress the tactile switching devices which represent flat spaces within the Braille character so that the tactile switching devices which represent the raised dot remain in a raised position to allow the user to tactilely feel the raised dot for learning purposes.

Thus, the configuration of the tactile switching devices within independent claim 1 and independent claim 38 are different from the input keys of Matsuoka. As stated above, Matsuoka is configured such that the input keys must be depressed to create corresponding signals for raised Braille dots. Therefore, since Matsuoka does not disclose the plurality of tactile switching devices mounted on the frame with each tactile switching device configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot, Matsuoka does not disclose each and every element of independent claims 1 and 38.

For the above reasons, Matsuoka does not anticipate independent claims 1 and 38. Since claim 42 depends from claim 38, Matsuoka further does not anticipate claim 42.

Accordingly, applicants respectfully submit the rejections of claims 1, 38, and 42 under 35 U.S.C. § 102(b) should be withdrawn.

V. Claim Rejection under 35 U.S.C. § 103(a)

Claims 2-4, 18, 28, 39-41, 49, and 50 stand rejection under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka et al. in view of art discussed in applicants' application. Claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46, and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of U.S. Patent No. 3,883,146 to Johnson et al. (hereinafter, "Johnson").

Claims 9, 16, 21, 26, 32, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of Johnson and further in view of U.S. Patent No. 6,022,220 to Haugen (hereinafter, "Haugen"). Claim 47 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of Haugen.

Claims 51-54 and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of art discussed within applicants' application and further in view of Johnson. Claim 55 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of art discussed within applicants' application and further in view of Haugen.

To establish a *prima facie* case of obviousness, the Examiner must meet the following criteria. First, there must be some suggestion or motivation either in the reference itself or the knowledge generally available to one of ordinary skill in the art, to modify the reference. MPEP §2143. Second, there must be a reasonable expectation of success. Id. Third, the prior art reference must teach or suggest all the claim elements. Id. In view of all the factual information, a determination must

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then be made as to whether the claimed subject matter as a whole would have been obvious at the time to that person. See MPEP §2142. Impermissible hindsight must be avoided and a legal conclusion of obviousness must be reached on the basis of the facts gleaned from the prior art. Id.

V. A. Summary of Independent Claims 18, 28, and 49 Rejected Under 35 U.S.C.

§ 103(a)

Independent claim 18 recites an apparatus for use in instructing a user to communicate in Braille. The apparatus includes a frame and a plurality of switching devices for selective activation by a user to represent one or more raised Braille dots. The apparatus includes a pair of arms pivotably coupled to the frame. Each arm supports at least three switching devices. The pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in 1 x 6 row of Braille dots for emulating a Braille writer. The apparatus further includes electronic circuitry supported by the frame and comprising an audio output device. The electronic circuitry communicates with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user. The auditory output corresponds to the Braille character represented by the combination of activated switching devices.

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Independent claim 28 recites an apparatus for use in instructing a user to communicate in Braille. The apparatus includes a frame and a plurality of tactile switching devices. Each tactile switching device is depressible between a lowered position and a raised position. The apparatus includes a pair of arms pivotably coupled to the frame. Each arm supports at least three tactile switching devices wherein, for the raised position of each switching device, at least a portion of the switching device is raised above an upper surface of its corresponding arm for emulating a raised Braille dot. The pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in 1 x 6 row of Braille dots for emulating a Braille writer. The apparatus further includes an electronic circuitry supported by the frame and comprising an audio output device. The electronic circuitry communicates with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user. The auditory output corresponds to the Braille character represented by the combination of activated switching devices.

Independent claim 49 recites a method for instructing a person in communicating in Braille. The method includes a step of providing a pair of arms with each arm supporting a least three tactile switching devices. Switching devices can be sensed by touch and selective actuated for emulating patterns of raised dots.

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The method also includes a step of rotating a pair of arms between a first position in which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell and a second position in which the arms are pivoted outwardly from each other in a 1 x 6 row of Braille dots for emulating a Braille writer. The method further includes a step for providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated in response to a combination of switching devices actuated.

V. B. Arguments Against the Rejections Under 35 U.S.C. § 103

Applicants respectfully submit that Matsuoka in view of the art discussed in the background section of the present application does not render independent claims 18, 28, and 49 obvious. In particular, neither Matsuoka nor the art discussed in the background section of the present application, alone or in combination, disclose, teach, or suggest every feature recited in independent claims 18, 28, and 49. As discussed above, Matsuoka discloses an electronic apparatus that has key input devices **2a - 2f** corresponding to each element of the predetermined Braille pattern. In particular, the apparatus provides a main body **1** with the input keys **2a - 2f** extending in a straight line for 1 x 6 configuration similar to a Braille writer. The electronic apparatus provides storage and input or output information which was input from the key input devices into the electronic apparatus.

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The swing cell instrument disclosed in the background section of the present application has two wooden arms that are either freely moveable or pivotably coupled to a base with three holes in each arm. Pegs can be placed into the holes to represent different Braille characters by the pegs extending up from the arms representing raised Braille dots.

Neither the electronic apparatus of Matsuoka nor the swing cell instrument disclosed in the present application disclose, teach, or suggest a pair of arms pivotably coupled to the frame with each arm supporting at least three tactile switching devices. These tactile switching devices as used within the present application comprise a set of push buttons for manipulation by the user and push button switches that are actuatable in response to manipulation of the respective push buttons. Matsuoka teaches input devices that are placed within the main body of the apparatus. The purpose of the electronic apparatus is to provide a compact easy-to-use Braille typewriter or word processor that provides easy portability. It does not disclose, teach, or suggest a pair of arms in which these input devices may be placed. The addition of such arms would add to the bulk and hurt the portability of the electronic apparatus which Matsuoka is trying to create. Thus, Matsuoka does not disclose, teach, or suggest a pair of arms that has at least three type of switching devices within each arm.

The swing cell instrument disclosed in the background section of the present application also does not provide a pair of arms with tactile switching devices. Instead, these crude devices provide holes within the arms in which separate

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independent components, such as pegs, that are free from the device itself may be placed within the holes. Such crude and simplistic hole and peg apparatuses are not tactile switching devices as used and defined within the present application. As stated within the application, the pegs that are used for placement in the holes within the swing arms are separate from the swing arms and can be easily lost by the student, teachers, parents, or therapists who are using the devices. Such individual crude components as pegs that are inserted into holes within the arms are not push buttons or push button switches which comprise tactile switching devices disclosed within the present application.

Further, one of ordinary skill in the art would not look to the crude swing cell instruments disclosed within the present application to modify the electronic apparatus of Matsuoka. Neither the swing cell instruments disclosed in the background section of the present application nor Matsuoka disclose, teach, or suggest how to accomplish the creation of a swing arm that has tactile switching devices therein which permits auditory output through electronic circuitry and permits the movement of the swing arm between a first position and second position. One of ordinary skill in the art would not look to wooden swing cell arms on a swing cell instrument to modify Matsuoka. One of ordinary skill in the art would not look to wooden swing cell arms on a swing cell instrument to modify Matsuoka.

The addition of the swing arms to the Matsuoka device, as discussed above, actually teaches away from a major tenant of Matsuoka in providing a portable easy-to-use Braille typewriter or word processor. The swing arm which can convert from a

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1 x 6 typewriter to a 3 x 2 representation of the character adds bulk and size to the apparatus of Matsuoka. Further, there is no benefit in providing a typewriter or word processor for Braille since the 3 x 2 configuration is not used and is not useful for creating such a typewriter or word processor. Thereby, providing the apparatus of Matsuoka with the ability to have the swing arms adds size to the electronic apparatus in width, length, and height such that it becomes more bulky and, at best, limits the portability of the device. Thus, one of ordinary skill in the art would not look to the swing cell instruments disclosed in the present application to modify the portable Braille typewriter disclosed within Matsuoka.

Similarly, claims 2-4 which depend from claim 1 of the present application are also not render obvious by Matsuoka in view of the swing arm cell instrument disclosed within the present application. In particular, the swing cell instruments disclosed in the present application do not address the shortcomings outlined above regarding tactile switching devices discussed in claim 1. Further, neither Matsuoka nor the swing cell instruments disclosed in the present application disclose, teach, or suggest the pair of arms having at least three tactile switching devices recited in claims 2-4 of the present application. Similarly, as outlined above, there is no motivation to combine the swing cell instruments disclosed in the present application with the electronic apparatus of Matsuoka, because Matsuoka actually teaches away from the use of such arms which are employed by the swing cell instruments disclosed within the present application.

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For the above reasons, claims 2-4 and independent claims 18, 28, and 49 are not render obvious by Matsuoka in view of the swing cell instruments disclosed in the present application. Claim 50 depends from claim 49 and is also not rendered obvious by Matsuoka in view of swing cell instruments disclosed in the present application.

Similarly, applicants respectfully submit claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46, and 48 are not rendered obvious by Matsuoka in view of Johnson.

Johnson et al. discloses a hand-held playback device primarily used for audio teaching of correct pronunciation of words for transducing mini-records from the pages of books and other sheet material upon which it is shown or otherwise displayed some of the same information as is recorded on the record. However, Johnson does not overcome the significant shortcomings outlined above with regard to Matsuoka. In particular, Johnson does not disclose, teach, or suggest a plurality of tactile switching devices mounted on a frame with each tactile switching device being depressible by a user between a raised position for emulating a raised Braille dot and a lower position as called for in claims 1 and 38. Further, Johnson does not disclose, teach, or suggest a pair of arms pivotably coupled to a frame with each arm supporting a least three switching devices as called for in claims 18 and 28. Since claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46, and 48 depend from one of independent claims 1, 18, 28, and 38, applicants respectfully submit Matsuoka and Johnson, in combination or alone, do not disclose, teach, or suggest,

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every element within these claims. Therefore, applicants respectfully submit that claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46, and 48 are not render obvious by Matsuoka in view of Johnson.

Similarly, claims 9, 16, 21, 26, 32, and 35 are not render obvious by Matsuoka in view of Johnson and further in view of Haugen. Haugen discloses a memory wire Braille tactile system for continuously reciprocating a plurality Braille characters on a single display. The device automatically changes position of contactors 40 through memory wire 30 to provide four different Braille characters on the plate 50 of the device. The user does not push in the contactors but rather the device itself provides output of Braille characters with no input from the user so that the user may read the Braille characters. However, the user does not depress any of these contact members. Haugen does not overcome the significant shortcomings outlined above with regard to Matsuoka and Johnson. Haugen does not disclose, teach, or suggest tactile switching devices which are depressible by the user between a raised position for emulating a raised Braille dot and a lower position as called for in claim 1. Further, Haugen does not disclose, teach, or suggest a pair of arms which each arm having at least three switching devices as called for in independent claims 18 and 28. Since claims 9 and 16 depend from claim 1, claims 21 and 26 depend from claim 18 and claims 32 and 35 depend from claim 28, applicants respectfully submit that Matsuoka in view of Johnson and further in view of Haugen does not disclose, teach, or suggest each and every element of these claims.

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Claim 47 also is not rendered obvious by Matsuoka in view of Haugen. Claim 47 depends from claim 38. Applicants respectfully submit that Haugen does not overcome the significant shortcomings of Matsuoka as outlined above. In particular, Haugen does not disclose, teach, or suggest a tactile switching device that is depressible by the user between a raised position for emulating a raised Braille dot and a lower position that is recited in claim 38. Thus, since claim 47 depends from claim 38, applicants respectfully submit that Matsuoka in view of Haugen does not disclose, teach, or suggest each and every element that is called for in claim 47.

Claims 51-54 and 56 similarly are not rendered obvious by Matsuoka in view of the swing cell instrument disclosed within the present application and further in view of Johnson. As discussed above Matsuoka, the swing cell instrument disclosed within the present application, and Johnson do not disclose, teach, or suggest a pair of arms that are pivotably coupled to the frame and contain at least three switching devices within each arm as called for in claim 49. Since claim 51-54 and 56 depend from claim 49, applicants respectfully submit that Matsuoka, the swing cell instrument disclosed within the present application, and Johnson, do not disclose, teach, or suggest each and every element of claim 51-54 and 56.

Similarly, claim 55 is not rendered obvious by Matsuoka, in view of swing cell instrument disclosed in the present application and further in view of Haugen. As described above, Matsuoka, the swing cell instrument disclosed within the present application, and Haugen do not disclose, teach, or suggest a pair of arms pivotably coupled to the frame with each arm supporting at least three switching devices as is

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recited in independent claim 49. Since claim 55 depends from claim 49, applicants respectfully submit that Matsuoka, the swing cell instrument disclosed within the present application, and Haugen do not disclose, teach, or suggest each and every element recited in claim 55. Thus, applicants respectfully submit claim 55 is not rendered obvious by Matsuoka, in view of the swing cell instrument disclosed in the present application and further in view of Haugen.

For the above reasons, applicants respectfully submit that claims 2-37, 39-41, and 43-56 are not rendered obvious by the cite of prior art. Accordingly, applicants respectfully submit that rejections of claims 2-37, 39-41, and 43-56 under 35 U.S.C. §103(a) should be withdrawn and the claims be allowed at this time.

CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

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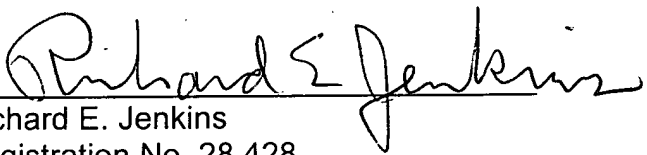
DEPOSIT ACCOUNT

The Commissioner is hereby authorized to charge any fees associated with the filing of this correspondence to Deposit Account No. 50-0426.

Respectfully submitted,

JENKINS, WILSON, TAYLOR & HUNT, P.A.

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